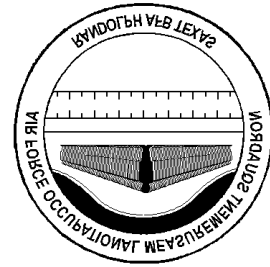




**UNITED STATES
AIR FORCE**



OCCUPATIONAL SURVEY REPORT



AEROSPACE PHYSIOLOGY

AFSC 4M0X1

OSSN: 2482

MAY 2002

**OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
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PREFACE

This report presents the results of an Air Force Occupational Survey of the Aerospace Physiology career ladder, Air Force Specialty Code (AFSC) 4M0X1. Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by technical training officials.

Captain Glenn Smith developed the survey instrument. Ms. Jeanie Guesman provided computer programming support and Ms. Dolores Navarro provided administrative support. First Lieutenant Larry Beer analyzed the data and wrote the final report. This report has been reviewed and approved by Major Jose E. Caussade, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to AFOMS/OMYXI, 1550 5th Street East, Randolph Air Force Base, Texas 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our web site at <https://www-r.omsq.af.mil>.

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SUMMARY OF RESULTS

1. **Survey Coverage**: The Aerospace Physiology career ladder was surveyed to provide current job and task data for use in promotion test development, and in updating career ladder documents and training programs. Survey results are based on responses from 168 Active Duty (AD) respondents.
2. **Specialty Jobs**: Structure analysis identified two clusters and four independent jobs. The following clusters and independent jobs make up the Aerospace Physiology Job Structure: Altitude Chamber Cluster, U2 Aerospace Physiology Cluster, Aerospace Physiology Training Manager Independent Job, Centrifuge Research Assistant Independent Job, Aerospace Physiology Manager Independent Job, and Hyperbaric Chamber Specialist Independent Job.
3. **Career Ladder Progression**: Skill-level progression for members of the Aerospace Physiology career ladder is typical, with a move from primarily spending time performing such activities as altitude chamber flight observer, crew chief, and life support at the 3- and 5-skill levels to a focus on job training, and supervisory and management work at the 7- and 9-skill levels.
4. **Training Analysis**: The current Specialty Training Standard (STS) provides comprehensive coverage of the work performed by career ladder personnel. STS and Plan of Instruction (POI) elements were generally well supported, with few exceptions. These exceptions should be reviewed to reaffirm their need for inclusion in the STS and POI.
5. **Job Satisfaction**: Job satisfaction among 4M0X1 personnel is higher than average for first-enlistment personnel, second-enlistment personnel, and members with 97 or more months Total Active Federal Military Service (TAFMS) when compared to responses from a comparative sample of Health Services career fields over the last 12 months. Job satisfaction has remained fairly constant over the last 3 years, since the previous OSR was conducted in 1998. Reenlistment intentions are down slightly from the previous survey for first-enlistment personnel. Second-enlistment job interest increased 14 percent, and career personnel increased 11 percent in sense of accomplishment.
6. **Predictive Retention**: Separation factors such as civilian job opportunities, off-duty education/training opportunities, and esprit de corps were recurring separation factors. Factors such as job security, retirement benefits, and medical or dental care were reported as weighing heavily on the reenlistment intentions of applicable members.
7. **Implications**: Survey results indicate that the present classification structure, as described in the latest specialty description, accurately portrays the jobs performed in this career ladder. The career ladder progression is typical, showing a movement toward responsibilities of job training, management, and supervision as incumbents progress to the 7- and 9-skill levels. Career ladder training documents appear, on the whole, to be well supported by survey data, but may require review so as to ensure appropriate proficiency coding. Job satisfaction ratings were higher than average.

**OCCUPATIONAL SURVEY REPORT (OSR)
AEROSPACE PHYSIOLOGY
(AFSC 4M0X1)**

INTRODUCTION

This is an Occupational Survey Report (OSR) of the Air Force Specialty Code (AFSC) 4M0X1 career ladder conducted by the Air Force Occupational Measurement Squadron (AFOMS). Authority for conducting occupational surveys is contained in AFI 36-2623. The last OSR was published in June 1999. Survey data will be used to identify current utilization patterns among career ladder personnel, to develop promotion tests for the specialty, and to evaluate career ladder documents and training programs.

Background

As described in the *Specialty Description* in AFMAN 36-2108, *Enlisted Classification*, 31 October 2001, members of the Aerospace Physiology career ladder manage aerospace physiology operation facilities. These individuals also operate and maintain aerospace physiology devices including altitude chambers. They instruct or observe simulated flights to altitude, and instruct in a classroom. They train flying personnel in subjects such as aircraft pressurization, night vision, emergency first aid, oxygen equipment, and emergency escape from aircraft. Other areas of responsibility include physiology research and development, parasail instruction, and high altitude pressure suit maintenance.

Upon graduation from Basic Military Training (BMT), airmen attend the Aerospace Physiology Apprentice Course B3ABY4M031-001 offered at Brooks AFB TX, which lasts 8 weeks and 1 day. Entry into the career ladder currently requires an Armed Services Vocational Aptitude Battery (ASVAB) minimum score of 43 in the General category, and a strength factor of "G" (weight lift of 40 lbs).

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SURVEY METHODOLOGY

Inventory Development

This survey instrument was developed to include the tasks performed by 4M0X1, Aerospace Physiology personnel. The data collection instrument for this occupational survey was USAF Job Inventory (JI) Occupational Survey Study Number (OSSN) 2482, dated July 2001. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, pertinent tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 16 subject-matter experts (SMEs) representing 2 operational units and 1 training unit.

<u>BASE</u>	<u>UNITS VISITED</u>
Brooks AFB TX	USAFSAM/AETU
Beale AFB CA	9 PSPTS/CEM
Holloman AFB NM	49 ADOS/SGGT

The resulting JI contains a comprehensive listing of 530 tasks grouped under 14 duty headings. The JI also includes a background section of 13 questions. The background questions request grade, base, MAJCOM assigned, organizational level, component status, job title, functional area, work schedule, equipment used or operated, work schedules, job titles, and various other background data.

Survey Administration

From July through October 2001, Survey Control Monitors at operational units worldwide administered the inventory to eligible 4M0X1 personnel. Job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX. Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in his or her current job. After checking all tasks performed, each member then rated each of these tasks on a 9-point scale to indicate relative time spent on that task compared to all other tasks checked. The ratings ranged from 1 (very small amount of time spent) through 5 (about average time spent) to 9 (very large amount of time spent). To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

Survey Sample

Table 1 reflects the percentage of distribution, by Duty AFSC (DAFSC), of assigned 4M0X1 Aerospace Physiology personnel as of July 2001. Surveys were sent to 93 percent of the eligible population, and 84 percent of the assigned population. The 168 respondents in the final sample represent 61 percent of eligible personnel, and 55 percent of the total assigned population. Table 2 reflects the paygrade and MAJCOM distribution for this study.

TABLE 1

DAFSC DISTRIBUTION OF SURVEYED PERSONNEL

DAFSC	% Assigned *	% Sample
4M031	21	24
4M051	51	48
4M071	25	24
4M091	3	4

Total Assigned * 304

Total Surveyed ** 255

Total in Survey Sample 168

Percent of Surveyed in Sample 61

Percent of Assigned in Sample 55

* Assigned strength as of July 2001

** Excludes personnel in PCS, student, hospital status, or less than 6 weeks on the job

TABLE 2
PAYGRADE/COMMAND DISTRIBUTION OF SURVEY SAMPLE

PAYGRADE	% Assigned*	% Sample
E-1	3	0
E-2	3	7
E-3	15	18
E-4	19	17
E-5	28	27
E-6	19	18
E-7	11	10
E-8	1	2
E-9	**	1
COMMAND	% Assigned*	% Sample
ACC	39	33
AETC	24	29
AFMC	17	15
AMC	9	10
PACAF	6	7
USAFA	4	5
USAFE	1	1

* As of July 2001

** Less than 1%

As can be seen from Tables 1 and 2, the DAFSC and Command distributions of the survey sample are close to the percent assigned. As a whole, these distributions indicate a high probability that the survey accurately represents the population for this career ladder.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career

ladder. To obtain the needed task factor data, selected senior 4M0X1 personnel (generally E-6 or E-7 craftsmen) also completed a second survey for either training emphasis (TE) or task difficulty (TD). These surveys were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within the report.

Training Emphasis (TE): TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The senior NCOs who completed a TE survey were asked to select tasks they felt require some sort of structured training for entry-level personnel and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided at resident training schools, field-training detachments (FTDs), mobile training teams (MTTs), formal on-the-job training (OJT), or any other organized training method. Interrater agreement for these raters was good. The average TE rating was 2.10 with a standard deviation of 1.32. Any task with a TE rating of 3.42 or above is considered to have high TE.

Task Difficulty (TD): TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The senior NCOs who completed TD surveys were asked to rate the difficulty of each task using a 9-point scale (extremely low to extremely high). Interrater reliability was good. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

When used in conjunction with the primary criterion of percent members performing, percentage of time spent, TE and TD ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting entry-level jobs.

CAREER LADDER STRUCTURE

Specialty Jobs

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Program (CODAP) assists by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group, or forms new groups based on the similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the **Job**. When two or more jobs have a substantial degree of similarity, in tasks performed and time spent on tasks, they are grouped together and identified as a **Cluster**. The structure of the career ladder is defined in terms of jobs and clusters. Stand-alone jobs not falling within clusters are called independent jobs.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, eight clusters and six independent jobs were identified within the career ladder. Figure 1 illustrates the existing cluster and independent jobs of 4M0X1 personnel.

A listing of the clusters and independent jobs is provided below. The stage (ST) number shown beside each title references computer-printed information, the letter "N" indicates the number of personnel in each group.

- I. ALTITUDE CHAMBER CLUSTER (STG 009, N=130)
 - A. Altitude Chamber Apprentice Job (STG 022, N=31)
 - B. HAAMS (High Altitude Airdrop Mission Support) Job (STG 039, N=4)
 - C. Hypobaric Chamber Instructor/Monitor Job (STG 027, N=36)
 - D. Hyperbaric Chamber Specialist Job (STG 049, N=11)
 - E. Altitude Chamber NCOIC Job (STG 017, N=33)
 - F. UPT Parasail Job (STG 053, N=13)
- II. U2 AEROSPACE PHYSIOLOGY CLUSTER (STG 012, N=17)
 - A. U2 Aerospace Physiology NCOIC Job (STG 025, N=3)
 - B. U2 Aerospace Physiology Technician Job (STG 016, N=14)
- III. AEROSPACE PHYSIOLOGY TRAINING MANAGER INDEPENDENT JOB (STG 018, N=4)
- IV. CENTRIFUGE RESEARCH ASSISTANT INDEPENDENT JOB (STG 011, N=4)
- V. AEROSPACE PHYSIOLOGY MANAGER INDEPENDENT JOB (STG 019, N=3)
- VI. HYPERBARIC CHAMBER SPECIALIST INDEPENDENT JOB (STG 038, N=6)

The respondents forming these clusters and jobs account for 98 percent of the survey sample. The remaining 2 percent did not group into clusters or jobs. Examples of duty titles for these personnel include the following: Career Development Course (CDC) Writer and Dormitory Chief.

DAFSC 4M0X1 JOB STRUCTURE
(N = 164)

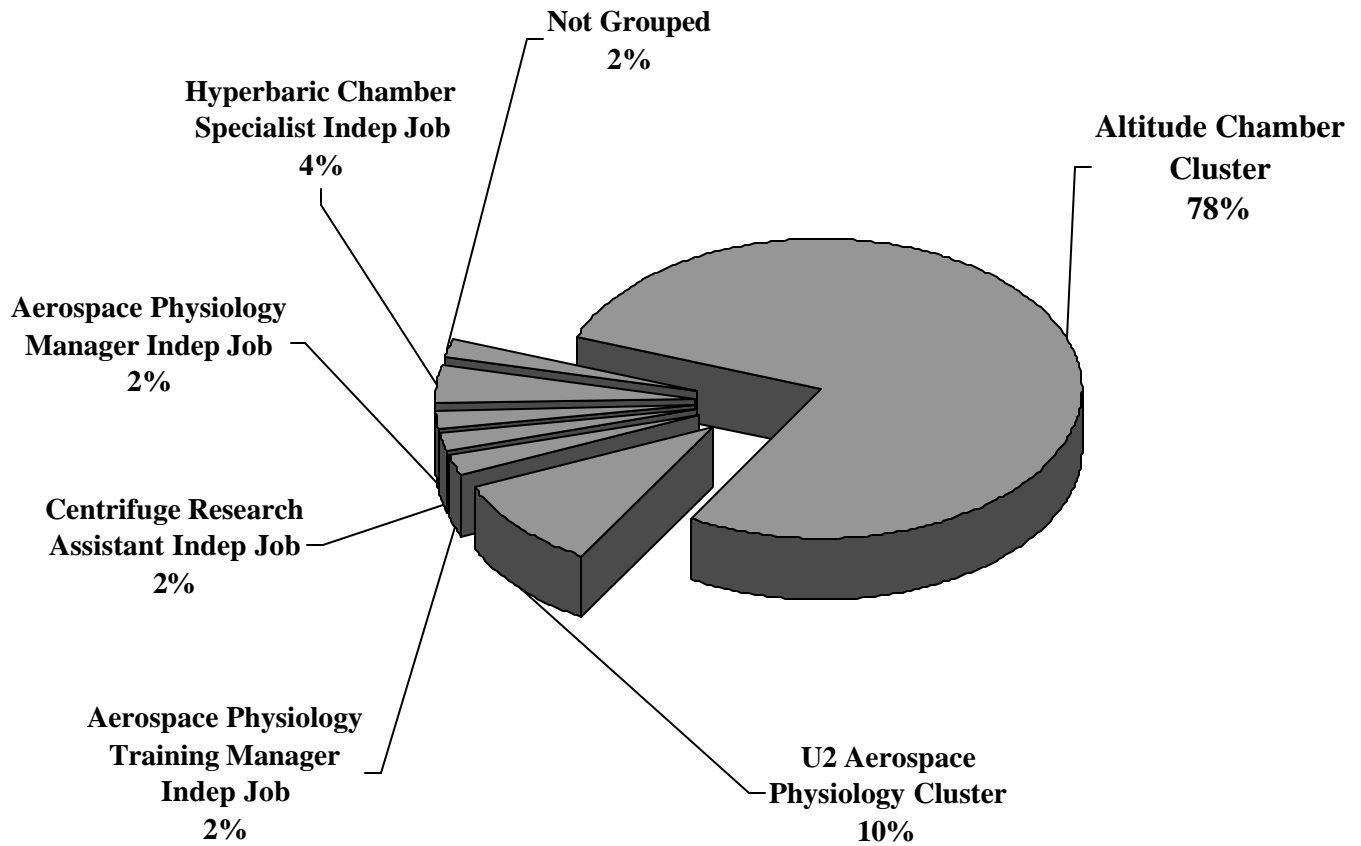


FIGURE 1

Group Descriptions

The following paragraphs contain brief descriptions of the Aerospace Physiology job structure identified in the career ladder analysis. Table 3, Page 14, presents the relative time spent on duties by members of this career ladder. Selected background data for this cluster and these jobs are provided in Table 4, Page 15. Representative tasks for all the groups are contained in Appendix A.

I. ALTITUDE CHAMBER CLUSTER (STG

009). The largest cluster, containing 130 members, the Altitude Chamber Cluster makes up 78 percent of the overall sample. Thirty-six percent of these airmen are still in their first enlistment. Twenty-four percent of their time is spent on Duty A, Performing Hypobaric Chamber Activities, 18 percent of their time is spent on Duty C, Performing Aerospace Physiology Instruction or Training Activities, and 14 percent of their time is spent on Duty N, Performing Management and Supervisory Activities. Representative tasks for these individuals include the following:

ALTITUDE CHAMBER CLUSTER	
	AD
Number of members	130
Average # of tasks performed	86
Average time in present job	46 mos
Average time in career field	106 mos
TAFMS	117 mos
Predominant paygrade	E-5

- Perform Type 2 chamber flights
- Perform Type 4 chamber flights
- Perform inside observer duties during hypobaric chamber flights, other than research flights
- Perform Type 1 chamber flights
- Perform operational and emergency procedures as crew chief
- Fit students with oxygen masks
- Fit students with flight helmets
- Conduct briefings on rapid decompression
- Perform operational and emergency procedures as chamber operator
- Conduct classroom instruction concerning PRICE check
- Perform Pressure Regulator Indicator Connections and Emergency (PRICE) check
- Perform operational and emergency procedures as lecturer observer
- Perform operational and emergency procedures as recorder

Twenty-eight percent of these personnel hold a paygrade of E-5, 22 percent E-3, and 18 percent of these members are E-6. Average time in career field for AD members is almost nine years, and average TAFMS is almost 10 years.

Several jobs fall within the Altitude Chamber Cluster. Members of these jobs, while sharing similar altitude chamber tasks, distinguish themselves by concentrating their time on specific areas of altitude chamber activities. The 31 members of the Altitude Chamber Apprentice Job concentrate their time on fundamental altitude chamber activities, specifically related to the hypobaric chamber. Also noteworthy

is that 68 percent of these airmen are either E-2 or E-3. The High Altitude Airdrop Support Mission (HAAMS) Job is unique in that members spend substantially more time than other airmen in the career field on HAAMS activities. Members of the Hypobaric Chamber Instructor/Monitor Job perform many fundamental hypobaric chamber activities, to include instruction and monitoring of hypobaric training. Seventy-two percent of these airmen are either E-5 or E-6. The Hyperbaric Chamber Job is distinctive in the fact that while these members spend most of their time on hypobaric chamber activities, they also spend time on hyperbaric chamber activities. Most other members of the cluster do not spend as much time on hyperbaric chamber activities. These members are located at either Peterson AFB or Kadena AFB, where small field training hyperbaric chambers are still in use. The Altitude Chamber NCOIC Job is comprised of airmen who work closely with altitude chamber operations, but concentrate most of their time overseeing activities, and ensuring compliance with standards. They also supervise airmen working in their units. The last job within the Altitude Chamber Cluster is the Undergraduate Pilot Training (UPT) Parasail Job. These airmen work at UPT bases, and instruct UPT students on aerospace physiology, as well as parasail activities dealing with proper Parachute Landing Falls (PLFs) and potential physiological hazards of aircraft ejection.

II. U2 AEROSPACE PHYSIOLOGY CLUSTER (STG 012).

The 17 airmen within this cluster (10 percent of the survey sample) are involved in U2 operations, primarily dealing with pressure suits. These members perform an average of 59 tasks. Sixty-eight percent of their time is spent on Duty C, Performing Pressure Suit Physiological Support Activities. Another 12 percent of their time is spent on Duty N, Performing Management and Supervisory Activities. Representative tasks include the following:

U2 AEROSPACE PHYSIOLOGY CLUSTER	
	AD
Number of members	17
Average # of tasks performed	59
Average time in present job	27 mos
Average time in career field	101 mos
TAFMS	112 mos
Predominant paygrade	E-4&5

- Perform high-flight launch activities, such as preflight, layout, physical, dress, integration, prior to entry, or hookup
- Perform preflight physical examinations of pressure suit occupants
- Perform high-flight recovery procedures
- Perform occupied full pressure suit integration tests
- Perform high-flight vent change over procedures
- Prepare full pressure suit for pilot dressing
- Troubleshoot full pressure suit assemblies
- Perform low-flight launch activities, such as preflight, pick-up, prior to entry, or hookup
- Inspect full pressure suits
- Assist pilot in full pressure suit donning
- Perform high- or low-flight cockpit hookup checks

The predominant paygrades for the overall cluster are E-4 and E-5 at 35 percent each, followed closely by E-6 at 24 percent. Average time in career field for these individuals is over 8 years, and with an average of over 9 years Total Active Federal Military Service (TAFMS).

Two jobs comprise the U2 Aerospace Physiology Cluster. The first job is the U2 Aerospace Physiology Technician Job, whose airmen deal primarily with training proper use and maintenance of the pressure suits used in flying the U2 aircraft. The second job is the U2 Aerospace Physiology NCOIC Job. These individuals supervise and manage the U2 Aerospace Physiology. All of these airmen are located at Beale AFB.

III. AEROSPACE PHYSIOLOGY TRAINING MANAGER INDEPENDENT JOB (STG 018).

The four members of this independent job make up two percent of the overall sample. These individuals perform an average of 66 tasks. Twenty-seven percent of their time is spent performing Duty M, Performing Training Activities, and another 27 percent on Duty N, Performing Management and Supervisory Activities. Seventeen percent of their time is spent on Duty C, Performing Aerospace Physiology Instruction or Training Activities. As its name implies, members of this job concentrate almost all of their time on training activities. Representative tasks include the following:

- Establish or maintain study reference files
- Evaluate effectiveness of training programs, plans, or procedures
- Develop training programs, plans, or procedures
- Maintain on-the-job (OJT) training records or files
- Develop or procure training materials or aids
- Conduct general meetings, such as staff meetings, briefings, conferences, or workshops
- Maintain administrative files
- Personalize lesson plans
- Determine training requirements
- Brief personnel, other than students, concerning training programs or matters
- Compile data for records, reports, logs, or trend analyses

Seventy-five percent of these personnel hold a paygrade of E-6. Average time in career field is 14½ years, and average TAFMS is almost 17 years.

AEROSPACE PHYSIOLOGY TRAINING MANAGER INDEPENDENT JOB	
	AD
Number of members	4
Average # of tasks performed	66
Average time in present job	8 mos
Average time in career field	175 mos
TAFMS	200 mos
Predominant paygrade	E-6

IV. CENTRIFUGE RESEARCH ASSISTANT INDEPENDENT JOB (STG 011).

These four airmen comprise about two percent of the overall sample. They perform an average of 72 tasks. Thirty-nine percent of their time is spent on Duty G, Performing Physiological Research Activities, 15 percent on Duty N, Performing Management and Supervisory Activities, and 13 percent on Duty M, Performing Training Activities. Representative tasks for members of this job include:

CENTRIFUGE RESEARCH ASSISTANT INDEPENDENT JOB	
	AD
Number of members	4
Average # of tasks performed	72
Average time in present job	42 mos
Average time in career field	86 mos
TAFMS	128 mos
Predominant paygrade	E-4

- Serve as centrifuge central observer
- Conduct pre-centrifuge ride briefings
- Connect or disconnect personal equipment to or from centrifuge
- Perform central observer duties during centrifuge operations
- Perform operator duties during centrifuge operations
- Review centrifuge panel member's record for accuracy
- Maintain administrative files
- Counsel trainees on training progress
- Determine training requirements
- Develop training programs, plans, or procedures
- Secure electrocardiograph (EKG) leads to subject

Fifty percent of these airmen are E-4, 25 percent E-5, and 25 percent E-7. Average time in career field is over 7 years, and average TAFMS is almost 11 years.

V. AEROSPACE PHYSIOLOGY MANAGER INDEPENDENT JOB (STG 019).

Comprising almost 2 percent (3 members) of the sample, the average for tasks performed is 40 tasks. Seventy-six percent of their time is spent on Duty N, Performing Management and Supervisory Activities, and 11 percent of their time is spent on Duty H, Performing Hyperbaric Chamber Activities. Representative tasks include the following:

AEROSPACE PHYSIOLOGY MANAGER INDEPENDENT JOB	
	AD
Number of members	3
Average # of tasks performed	40
Average time in present job	16 mos
Average time in career field	229 mos
TAFMS	229 mos
Predominant paygrade	E-7

- Interpret policies, directives, or procedures for subordinates
- Conduct general meetings, such as staff meetings, briefings, conferences, or workshops
- Counsel subordinates concerning personal matters
- Evaluate personnel for promotion, demotion, reclassification, or special awards
- Inspect personnel for compliance with military standards

- Write recommendations for awards or decorations
- Write or endorse military performance reports
- Develop or establish work schedules
- Evaluate personnel for compliance with performance standards, other than students
- Establish performance standards for subordinates
- Initiate actions required due to substandard performance of personnel
- Determine or establish work assignments or priorities

Sixty percent of these personnel hold the E-6 paygrade, while 20 and 16 percent of these members hold paygrades E-7 and E-5, respectively. One hundred percent are AD. Average time in career field is over 14 years, and average TAFMS is over 15 years.

VI. HYPERBARIC CHAMBER SPECIALIST INDEPENDENT JOB (STG 038).

Comprising almost four percent (6 members) of the sample, members of this independent job perform an average of 43 tasks. Eighty-one percent of their time is spent on Duty H, Performing Hyperbaric Chamber Activities, and 9 percent is spent on Duty A, Performing Hypobaric Chamber Activities. These individuals distinguish themselves by spending their time on hyperbaric chamber activities, and are located at Travis AFB, Brooks AFB, or Kadena AB. Representative tasks include the following:

HYPERBARIC CHAMBER SPECIALIST INDEPENDENT JOB	
	AD
Number of members	6
Average # of tasks performed	43
Average time in present job	16 mos
Average time in career field	79 mos
TAFMS	80 mos
Predominant paygrade	E-4

- Perform chamber operator duties during hyperbaric chamber dives
- Perform crew chief duties during hyperbaric chamber dives
- Perform inside observer duties during hyperbaric chamber dives
- Perform loss of breathing gas safety procedures
- Perform loss of accumulator air supply safety procedures
- Perform mechanical emergencies safety procedures
- Perform contaminated air supply safety procedures
- Perform timekeeper duties during hyperbaric chamber dives
- Perform procedures for maintaining infection control standards for hyperbaric treatment facilities
- Prepare and maintain computer generated hyperbaric maintenance forms and reports
- Perform compressor failure safety procedures

Sixty-six percent of these personnel hold a paygrade of E-4, 17 percent hold the E-3 paygrade, and the remaining 17 percent hold the E-5 paygrade. Average time in career field is over six years, and average TAFMS is almost 7 years.

Comparison to Previous Study

Results of the specialty job analysis were compared to those of the last Aerospace Physiology OSR, published in 1999. As shown in Table 5, the majority of jobs identified previously were also identified in this study. The Altitude Chamber Cluster from the current study seemingly encompasses the Apprentice Chamber Cluster, Supervisory Job, and General Physiology Job from the previous study, and the clusters and jobs identified in the previous study correspond well to the current Altitude Chamber Apprentice Job, Altitude Chamber NCOIC Job, and the Hypobaric Chamber Instructor/Monitor Job, respectively. Despite the differences in these job classifications, the core jobs of the AFSC have remained fairly stable over time. The previous OSR splits several of the jobs into independent jobs, whereas the current OSR clusters them into one grouping. Possibly the greatest change has been the 20 percent downsize of the entire career ladder from 381 to 304 personnel, a 20 percent drop in career field manning.

Summary

Career field analysis identified two clusters and four independent jobs. This job structure indicates that the full range of duties and responsibilities of the Aerospace Physiology AFSC are being performed. Major responsibilities include hypobaric and hyperbaric altitude chamber activities, HAAMS, parasail, and pressure suit activities, and centrifuge research activities.

TABLE 3

AVERAGE PERCENT TIME SPENT ON DUTIES BY SPECIALTY JOBS **

<u>DUTIES</u>	Alt Chamber Cluster (STG 009)	U2 Aero Phys Cluster (STG 012)	Aero Phys Tng Mgr Indep Job (STG 018)	Centrifuge Research Asst Indep Job (STG 011)	Aero Phys Mgr Indep Job (STG 019)	Hyper Chbr Spec Indep Job (STG 038)
A PERF HYPOBARIC CHAMBER ACTIVITIES	2	34	19	44	17	11
B PERF LIFE SUPPORT EQUIPMENT ACTIVITIES, OTHER THAN PRESS SUIT	*	1	*	5	6	1
C PERF AERO PHYS INSTRUCTION OR TRAINING ACTIVITIES	*	*	1	1	3	1
D PERF PRESSURE SUIT PHYS SUPPORT ACTIVITIES	*	3	1	*	*	2
E PERF HIGH-ALT AIRDROP MISSION SUPPORT (HAAMS) ACTIVITIES	*	4	*	1	*	1
F PERF AIRCRAFT EMER ESCAPE AND SPECIAL PHYS TRAINER ACTIVITIES	*	20	69	*	4	75
G PERF PHYS RESEARCH ACTIVITIES	*	31	3	2	1	5
H PERF HYPERBARIC CHAMBER ACTIVITIES	*	1	1	3	58	1
I PERF PARASAIL ACTIVITIES	*	*	*	*	*	*
J PERF GENERAL ADMIN AND TECH ORDER (TO) SYS ACTIVITIES	1	*	*	3	3	1
K PERF GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3	2	2	13	3	*
L PERF MEDICAL READINESS ACTIVITIES	89	2	2	19	2	1
M PERF TRAINING ACTIVITIES	3	1	*	7	1	*
N PERF MANAGEMENT AND SUPERVISORY ACTIVITIES	1	*	*	*	*	*

* Indicates less than 1 percent

** Columns may not add up to 100 due to rounding

TABLE 4
SELECTED BACKGROUND DATA FOR SPECIALTY JOBS*

	Alt Chamber Cluster (STG 009)	U2 Aero Phys Cluster (STG 012)	Aero Phys Tng Mgr Indep Job (STG 018)	Centrifuge Research Asst Indep Job (STG 011)	Aero Phys Mgr Indep Job (STG 019)	Hyper Chbr Spec Indep Job (STG 038)
PERCENT SAMPLE	78	10	2	2	2	4
PERCENT CONUS	89	94	75	100	100	83
PERCENT DAFSC						
4M031	28	6	0	0	0	17
4M051	45	76	25	75	33	83
4M071	23	18	75	25	67	0
4M091	5	0	0	0	0	0
PERCENT PAYGRADE						
E-1	0	0	0	0	0	0
E-2	8	0	0	0	0	0
E-3	22	6	0	0	0	17
E-4	11	35	0	50	0	67
E-5	28	35	0	25	0	17
E-6	18	24	75	0	33	0
E-7	10	0	25	25	67	0
E-8	3	0	0	0	0	0
E-9	1	0	0	0	0	0
AVG MOS TAFMS	117	112	200	128	229	80
AVG MOS CAREER FIELD	106	101	175	86	229	79
PERCENT 1ST ENL	36	18	0	0	0	17
PERCENT SUPERVISING	56	53	0	75	67	13
AVERAGE # TASKS	130	17	66	72	40	43

* Numbers do not always add up to 100 percent due to rounding.

TABLE 5
COMPARISON OF JOB GROUPS IN CURRENT STUDY
TO PREVIOUS STUDY

2002 STUDY (N=168)	PERCENT OF SAMPLE	1999 STUDY (N=247)	PERCENT OF SAMPLE
I. Altitude Chamber Cluster	78	I. Apprentice Chamber Cluster	20
II. U2 Aerospace Physiology Cluster	10	II. U2 Aircraft Job	12
III. Aerospace Physiology Training Manager Independent Job	2	III. Procedures Trainer Job	6
IV. Centrifuge Research Assistant Independent Job	2	IV. Research Job	4
V. Aerospace Physiology Manager Independent Job	2	V. Supervisory Job	28
VI. Hyperbaric Chamber Specialist Independent Job	4	VI. Hyperbaric Chamber Job	3
VII. Not Identified	2	VII. General Physiology Job	21
Not Grouped	2	Not Grouped	6

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as the AFMAN 36-2108, *Enlisted Classification*, and the Career Field Education and Training Plan (CFETP), reflect what career ladder personnel are actually doing in the field.

Skill-Level Descriptions

DAFSC 4M031. These 41 airmen make up 24 percent of the survey sample. Seventy-eight percent of these members are in the Altitude Chamber Cluster (see Table B1). Three-skill-level personnel spend the greatest amount of their time, 36 percent, on Duty A, Perform Hypobaric Chamber Activities, followed by Duty C, Perform Aerospace Physiology Instruction or Training Activities at 16 percent, and an additional 12 percent of their time is spent on Duty B, Perform Life Support Equipment Activities, Other Than Pressure Suit (see Table B2). Table B3 lists common tasks performed by these individuals, such as performing inside observer duties during hypobaric chamber flights, other than research flights; performing types 4, 2, and 1 chamber flights; and performing operational and emergency procedures as crew chief. They perform an average of 55 tasks.

DAFSC 4M051. Representing 48 percent of the total survey sample, these 81 airmen are performing most of their work in the Altitude Chamber Cluster (see Table B1). The 5-skill level personnel spend less than half as much time (17 percent) on Duty A, Perform Hypobaric Chamber Activities, as those in the 3-skill-level group (see Table B2). However, Duty A remains the main duty performed by 5-skill levels. Duty C, Perform Aerospace Physiology Instruction or Training Activities, is close behind Duty A, occupying 16 percent of their time. There are substantial increases in time spent on certain duties compared to 3-skill levels. Time spent on Duty D, Perform Pressure Suit Physiology Support Activities, quadruples from 3 to 12 percent. Time spent on Duty N, Perform Management and Supervisory Activities, increases from 2 to 11 percent. Also, time spent on Duty H, Perform Hyperbaric Chamber Activities, doubles from five to ten percent. These individuals perform an average of 79 tasks. Examples of tasks that best differentiate 3- and 5-skill level work are shown in Table B5.

DAFSC 4M071. These 40 airmen make up 24 percent of the survey sample. Seventy-two and 16 percent of these individuals fall within the Altitude Chamber Cluster and U2 Aerospace Physiology Cluster, respectively. Table B2 reveals that the majority of time for these airmen is spent on Duty N, Perform Management and Supervisory Activities (30 percent); Duty A, Perform Hypobaric Chamber Activities (12 percent); Duty C, Perform Aerospace Physiology Instruction or Training Activities (12 percent); and Duty M, Perform Training Activities (11 percent). Table B6 lists predominant tasks performed by these 7-skill levels, reflecting the duties listed above. Seven-skill-level personnel perform an average of 104 tasks. Table B7 provides a comparison of tasks that best differentiate between the 5- and 7-skill-level personnel.

DAFSC 4M091. These six airmen make up less than four percent of the survey sample. As indicated by Table B1, the majority of individuals at this skill level are members of the Altitude Chamber Cluster. Primary duties lie in Duty N, Perform Management and Supervisory Activities (45 percent), followed by Duty M, Perform Training Activities (10 percent). Time spent on Duty A, Perform Hypobaric Chamber Activities, decreases from 12 to 4 percent. These data indicate a clear and pronounced shift from altitude chamber activities and aerospace physiology support activities to management and supervision, even compared to the 7-skill level. Table B9 compares work done between 7- and 9-skill levels, revealing a distinctly more management-oriented DAFSC.

Summary

Career progression for members in the Aerospace Physiology career ladder follows a typical pattern of fundamental job focus at the lower skill levels, including altitude chamber flights, life support, and other general aerospace physiology activities, progressing into supervision, management, and training activities.

TRAINING ANALYSIS

Occupational survey data are one of many sources of information that can be used to assist in the development of a training program relevant to the needs of personnel in their first enlistment. Factors that may be used in evaluating training include the overall description of the work being performed by first-enlistment personnel and their overall distribution across career ladder jobs, percentages of first-enlistment (1-48 months TAFMS) members performing specific tasks, as well as TE and TD ratings (previously explained in the **SURVEY METHODOLOGY** section).

First-Enlistment Personnel

In this study, there are 54 members in their first-enlistment (1-48 months TAFMS), representing 32 percent of the total survey sample. Figure 2 reflects the distribution of first-enlistment personnel within the AFSC. Forty-seven, or 87 percent of these airmen, are in the Altitude Chamber Cluster.

Table B10 displays the relative percentage of time spent on duties by first-enlistment personnel. At a combined 60 percent, the greatest amount of their time is devoted toward Duty A (32 percent), Perform Altitude Chamber Activities; Duty C (17 percent), Perform Aerospace Physiology Instruction or Training Activities; and Duty B (11 percent), Perform Life Support Equipment Activities, Other Than Pressure Suit. Table B11 lists representative tasks performed by first-enlistment personnel. All of the top 23 tasks fall within Duties A, B, and C. These individuals perform an average of 63 tasks. Table B12 reflects the equipment used by first-enlistment respondents.

**DISTRIBUTION OF DAFSC 4M0X1 FIRST-ENLISTMENT
PERSONNEL
ACROSS SPECIALTY JOBS
(N = 54)**

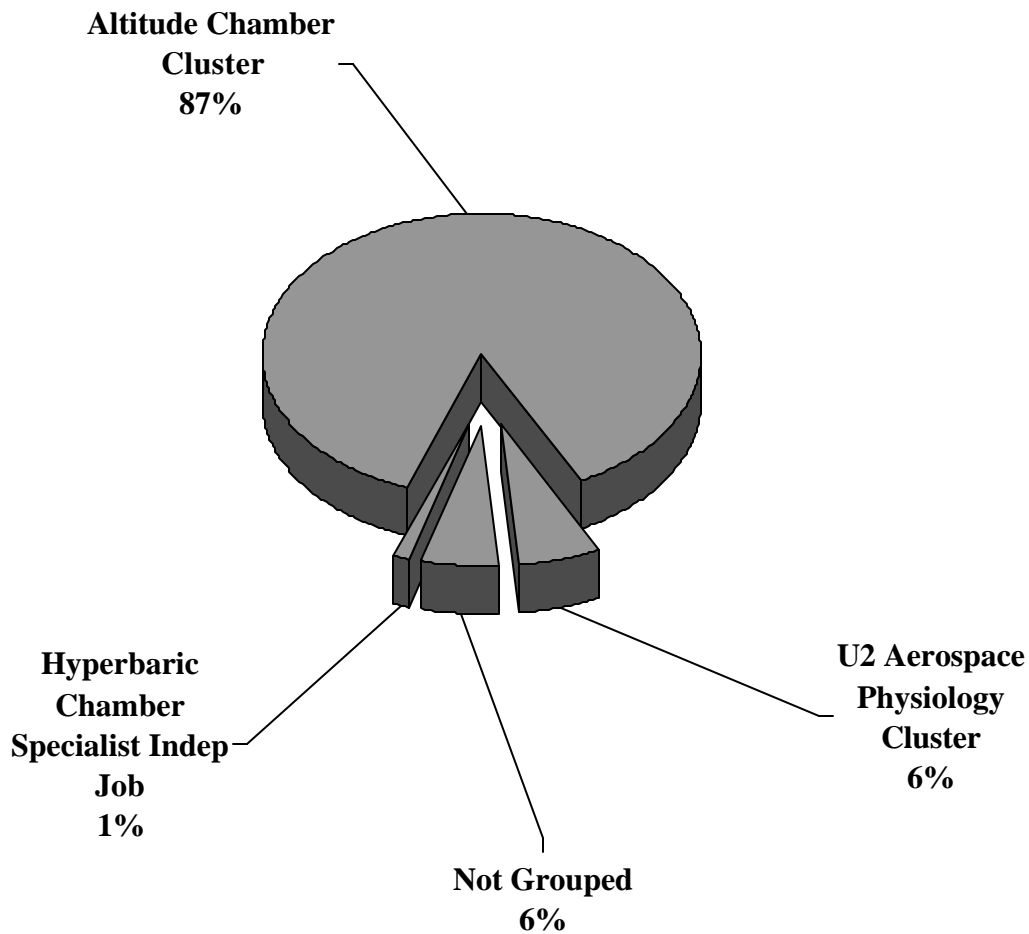


FIGURE 2

Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary factors that can assist technical school personnel in deciding which tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior career ladder NCOs working at operational units in the field, are collected to provide training personnel with a rank-ordering of those tasks in the JI considered important for first-enlistment personnel, along with a measure of the difficulty of the JI tasks. When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can then be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors, accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but are performed by low percentages of members, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist technical school personnel, AFOMS has developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an Automated Training Indicator (ATI) for each task. These indicators correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETCI 36-2601, and allows course personnel to quickly focus their attention on those tasks which are most likely to qualify for initial resident course consideration.

Table B13 presents examples of tasks with the highest TE rating for first-enlistment airmen. The average TE rating is 2.10, with a standard deviation of 1.32, making a high TE rating (average + SD) equal to 3.42. For example, TE raters reported that tasks, such as performing inside observer duties during hypobaric chamber flights, other than research flights, performing operational and emergency procedures as crew chief and chamber operator, and conducting classroom instruction concerning PRICE check, require a high level of training emphasis. Additionally, based on the data, many 4M0X1 airmen in their first job and within their first enlistment are performing these tasks.

Table B14 displays examples of tasks that 4M0X1 raters judged to be most difficult to learn. The average TD rating is 5.0, with a standard deviation of 1.0, making a high TD rating (average + SD) equal to 6.0. TD raters reported that tasks falling within Duty D, performing Pressure Suit Physiology Support Activities, and Duties M and N, performing Training, Management and Supervisory Activities, are the most difficult tasks to learn. A few examples of these tasks are performing overhaul inspections of full pressure suits and pressure suit controllers, developing formal course curricula, plans of instruction (POIs), or Specialty Training Standards (STSs), and performing jumpmaster duties during military freefalls.

Various lists of tasks accompanied by TE and TD ratings, and, where appropriate, ATI information, are contained in the TRAINING EXTRACT package and should be reviewed in detail by training school personnel. (For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.)

Specialty Training Standard (STS)

A comprehensive review of STS 4M0X1 dated June 2001, compared STS items to survey data. Technical school personnel from Brooks AFB TX matched JI tasks to appropriate sections of the STS.

AETCI 36-2601 states that tasks performed by 20 percent or more of any criterion group should be considered for inclusion in the STS. Normally, STS elements with matched tasks that are performed by at least 20 percent of personnel in appropriate experience or skill-level groups (first-job and first-enlistment) are considered supported and should probably be retained in the STS. Elements having tasks with less than 20 percent members performing across all criterion groups should be considered for deletion from the STS.

Table B15 gives examples of STS elements matched to tasks not performed by at least 20 percent or more of the active duty Aerospace Physiology personnel in target TAFMS groups. These should be reviewed to determine their continued necessity in the STS. Overall, the STS provides comprehensive coverage of the work performed by personnel in this career field.

Plan of Instruction

AETCI 36-2203 states that OSR data should be used, when available, to determine which tasks are performed by the first-enlistment personnel of the AFSC. Tasks performed or knowledge required by 30 percent or more of the personnel in each skill level of the AFSC should be considered for inclusion. In this study, tasks that are currently instructed in the entry-level course were matched to the 3-skill level course POI (J3ABR4M0X1) learning objectives. Any POI learning objective with low percentages (under 30 percent) of criterion group members performing matched tasks was considered unsupported. In this study, first-job and first-enlistment data were used to determine inclusion.

Table B16 lists examples of tasks matched to POI elements that are not performed by at least 30 percent of first-job or first-enlistment members. The inclusion of these POI elements is not supported by personnel reported performance in the field. These elements, and others in the Training Extract, should be reviewed to determine necessity of inclusion.

JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators of various groups can give career field managers a better understanding of some of the factors that may affect the job performance of airmen in the AFSC. Attitude questions covering job interest, perceived utilization of talents, sense of accomplishment from work, and reenlistment intentions were included in the survey booklet to provide indications of job satisfaction.

Table B17 presents job satisfaction data for AFSC 4M0X1 TAFMS groups, together with TAFMS data for a comparative sample of Health Services career fields from within the last 12 months. The comparative sample of career fields is Mental Health Services (4C0X1), Pharmacy (4P0X1), Optometry (4V0X1), and Ophthalmology (4V0X1A). All TAFMS groups were compared in the areas of perception of job interest, utilization of talents, utilization of training, and sense of accomplishment gained from work. Data show that the Aerospace Physiology career field generally rates higher across satisfaction indices than the comparative group for first-enlistment members.

An indication of how job satisfaction perceptions have changed over time is provided in Table B18. TAFMS data for the current survey respondents are presented, along with data from the last occupational survey report. Reenlistment intentions are down 10 percent from the previous survey for first-enlistment personnel. However, second-enlistment personnel job interest increased 14 percent over the last 3 years, and career personnel ratings increased 11 percent in sense of accomplishment.

In Table B19, a review of job satisfaction ratings is displayed for specialty clusters and jobs. Among clusters, the Altitude Chamber and U2 Aerospace Physiology Clusters rated especially high. Among independent jobs, the Aerospace Physiology Manager Independent Job rated slightly lower than the other, but is still well above average job satisfaction.

PREDICTIVE RETENTION ANALYSIS

The reenlistment trends of airmen are critical to career field recruiting and retention efforts. The projected reenlistment decisions of airmen have always been a standard part of the JI, included in the standard background question, “Do you plan to reenlist at the end of your current enlistment.” Available responses include “Will retire,” “No, or probably no,” and “Yes, or probably yes.” Starting in First Quarter 2001 this information was supplemented by the addition of 31 separation/reenlistment factors, now standard in all AFOMS JIs. Upon identifying one’s reenlistment intention, the respondent is asked to rate how each of these 31 variables has influenced his/her decision. Responses are recorded on a 3-point scale ranging from one to three for the choices slight, moderate, or strong influence, respectively.

Tables B20 and B21 summarize the reenlistment intentions of 4M0X1 personnel across TAFMS groups. Table B20 shows 4M0X1 TAFMS groups whose intentions are to reenlist, including a listing of 31 factors and their individual ratings. Outlined here are the influences the 31 retention factors had on their decision to reenlist. Factors with the highest average response scores for 1-48 months TAFMS include medical or dental care for active duty members, military-related education and training opportunities, off-duty education or training opportunities, pay and allowances, and military lifestyle. Respondents with 49-96 months TAFMS reported the following factors as having the most influence on their decision to reenlist: off-duty education or training opportunities, job security, military lifestyle, military-related education and training opportunities, and retirement benefits. Career airmen rated the following factors as most influential on their decision to reenlist: retirement benefits, job security, off-duty education or training opportunities, medical or dental care for active duty member, and pay and allowances.

Table B21 provides follow-on data across TAFMS groups for those who identified themselves as planning to separate. Factors with the highest average response scores for 1-48 months TAFMS include military lifestyle, pay and allowances, civilian job opportunities, recognition of efforts, and leadership of immediate supervisor. Respondents with 49-96 months TAFMS reported the following factors as having most influence on their decision to separate: pay and allowances, military lifestyle, esprit de corps/morale, leadership at unit level, and recognition of efforts. There was only one career airman (97+ months TAFMS) who intended to separate, and he or she was, therefore, not included in the table.

IMPLICATIONS

This survey was initiated to provide current job and task data for use in developing Specialty Knowledge Tests (SKTs), evaluating the AFMAN 36-2108 *Specialty Description*, and making decisions regarding training documents. Survey results indicate that the present classification structure, as described in the latest specialty description, accurately portrays the jobs performed in this career ladder. Most Aerospace Physiology personnel are found in the Altitude Chamber Cluster (78 percent).

Personnel in the Aerospace Physiology career ladder follow a typical career progression pattern. While members are in the lower skill levels, most of their time focuses on fundamental tasks such as altitude chamber flight observers and crew chiefs, life support activities, and altitude chamber instruction/training. As members progress through the skill levels to the 9-skill level, a clear emphasis is seen in time spent on job training, supervision, and management.

Survey data appear to support career ladder training documents. A few STS elements were matched to tasks performed by less than 20 percent of personnel. These items should be looked at closely to determine their necessity in the STS. The same can be said about the POI, except with a criterion of 30 percent of members performing. Those POI objectives should be evaluated to determine their continued inclusion in the POI.

Job satisfaction indicators, including reenlistment intentions, are higher than other Health Services career fields, and have remained fairly stable since the previous survey in 1998. Due to recent data supporting the high correlation between reenlistment intentions and actual reenlistment trends, these data may be useful for career field planning.

Factors such as civilian job opportunities, off-duty education/training opportunities, and esprit de corps were important to members who intend to separate. Factors such as job security, retirement benefits, and medical or dental care were reported as important to those members intending to reenlist.

APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED
BY SPECIALTY JOBS

TABLE A1

ALTITUDE CHAMBER CLUSTER

TASKS	PERCENT MEMBERS PERFORMING (N=130)
A0024 Perform Type 2 chamber flights	95
A0026 Perform Type 4 chamber flights	93
A0006 Perform inside observer duties during hypobaric chamber flights, other than research flights	92
A0023 Perform Type 1 chamber flights	88
A0010 Perform operational and emergency procedures as crew chief	88
B0038 Fit students with oxygen masks	88
A0001 Connect or disconnect high pressure oxygen cylinders	87
B0037 Fit students with flight helmets	86
C0062 Conduct briefings on rapid decompression	84
A0009 Perform operational and emergency procedures as chamber operator	83
C0076 Conduct classroom instruction concerning PRICE check	82
A0019 Perform Pressure Regulator Indicator Connections and Emergency (PRICE) check	81
A0011 Perform operational and emergency procedures as lecturer observer	79
A0013 Perform operational and emergency procedures as recorder	78
B0032 Clean flight helmets or oxygen masks	78
C0080 Conduct classroom instruction concerning Type 2 chamber flights	78
C0084 Conduct classroom instruction concerning use of oxygen equipment	76
C0082 Conduct classroom instruction concerning Type 4 chamber flights	75
C0079 Conduct classroom instruction concerning Type 1 chamber flights	72
A0012 Perform operational and emergency procedures as lock operator	71
M0470 Conduct tours of aerospace physiology facilities	70
C0064 Conduct classroom instruction concerning aircraft pressurization principles and problems	69
A0025 Perform Type 3 chamber flights	68
A0015 Perform oxygen flow checks of narrow panel pressure-demand oxygen regulators	65
M0469 Conduct OJT	62
C0066 Conduct classroom instruction concerning crash survival principles and procedures	60
M0481 Personalize lesson plans	58
C0074 Conduct classroom instruction concerning night vision principles and problems	56

A0027 Perform Type 5 chamber flights

55

TABLE A2

U2 AEROSPACE PHYSIOLOGY CLUSTER

TASKS		PERCENT MEMBERS PERFORMING (N=17)
D0143	Perform high-flight launch activities, such as preflight, layout, physical, dress, integration, prior to entry, or hookup	94
D0164	Perform preflight physical examinations of pressure suit occupants	94
D0144	Perform high-flight recovery procedures	88
D0147	Perform occupied full pressure suit integration tests	88
D0145	Perform high-flight vent change over procedures	88
D0165	Prepare full pressure suit for pilot dressing	88
D0186	Upload aircraft survival equipment	88
D0146	Perform low-flight recovery procedures	88
D0162	Perform preflight or postflight inspections of ventilation controllers (T-blocks)	88
D0160	Perform preflight or postflight inspections of parachutes	88
D0161	Perform preflight or postflight inspections of survival kits	88
D0182	Troubleshoot full pressure suit assemblies	82
D0137	Perform low-flight launch activities, such as preflight, pick-up, prior to entry, or hookup	82
D0121	Don or doff full pressure suits	82
D0119	Connect or disconnect full pressure suit to aircraft system	82
D0163	Perform preflight or postflight inspections of ventilation hoses	82
D0127	Inspect full pressure suits	76
D0097	Assist pilot in full pressure suit donning	76
D0142	Perform high-flight aircraft turn procedures	76
D0123	Employ hand-held ventilator for pilot/FPS integration	76
D0141	Perform high- or low-flight cockpit hookup checks	71
D0166	Prepare and review flight operations documentation	71
D0122	Download aircraft survival equipment	71
D0184	Troubleshoot pressure suit controllers	71

TABLE A3

AEROSPACE PHYSIOLOGY TRAINING MANAGER INDEPENDENT JOB

TASKS	PERCENT MEMBERS PERFORMING (N=4)
M0477 Establish or maintain study reference files	100
M0478 Evaluate effectiveness of training programs, plans, or procedures	100
M0474 Develop training programs, plans, or procedures	100
J0401 Maintain on-the-job (OJT) training records or files	100
M0476 Develop or procure training materials or aids	100
N0487 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	100
J0400 Maintain administrative files	100
M0479 Evaluate training methods or techniques of instructors	100
L0436 Don or doff chemical warfare personal protective clothing	100
M0481 Personalize lesson plans	75
M0472 Determine training requirements	75
M0467 Brief personnel, other than students, concerning training programs or matters	75
J0385 Compile data for records, reports, logs, or trend analyses	75
N0505 Establish organizational policies such as operating instructions (OIs) or standard operating procedures (SOPs)	75
N0502 Draft budget requirements	75
M0473 Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	75
N0524 Write job or position descriptions	75
N0520 Review budget requirements	75
N0494 Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	75
M0480 Maintain classroom training records or files	75
N0500 Develop or establish work methods or procedures	50
M0483 Write training reports	50
J0404 Maintain or update status indicators, such as boards, graphs, or charts	50

TABLE A4

CENTRIFUGE RESEARCH ASSISTANT INDEPENDENT JOB

TASKS		PERCENT MEMBERS PERFORMING (N=4)
G0296	Serve as centrifuge central observer	100
G0247	Conduct pre-centrifuge ride briefings	100
G0248	Connect or disconnect personal equipment to or from centrifuge	100
G0262	Perform central observer duties during centrifuge operations	100
G0274	Perform operator duties during centrifuge operations	100
G0298	Size and fit antigravity protective equipment	100
M0470	Conduct tours of aerospace physiology facilities	100
G0293	Review centrifuge panel member's record for accuracy	75
J0400	Maintain administrative files	75
M0471	Counsel trainees on training progress	75
M0472	Determine training requirements	75
M0474	Develop training programs, plans, or procedures	75
G0263	Perform chamber operator duties during research chamber flights	75
N0493	Counsel subordinates concerning personal matters	75
G0297	Set centrifuge seat configurations	75
G0264	Perform crew chief duties during centrifuge operations	75
M0478	Evaluate effectiveness of training programs, plans, or procedures	75
G0294	Schedule centrifuge operations	75
G0252	Fit crewmembers with in-flight monitoring equipment	75
G0250	Design centrifuge seat configurations	75
G0295	Secure electrocardiograph (EKG) leads to subject	50
G0265	Perform crew chief duties during research chamber flights	50
G0275	Perform outside observer duties during research chamber flights	50
G0283	Perform recorder duties during research chamber flights	50
J0387	Complete chamber-related accident or incident reports	50
G0299	Size and fit research subjects with oxygen equipment	50

TABLE A5

AEROSPACE PHYSIOLOGY MANAGER INDEPENDENT JOB

TASKS		PERCENT MEMBERS PERFORMING (N=3)
N0517	Interpret policies, directives, or procedures for subordinates	100
N0487	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	100
N0493	Counsel subordinates concerning personal matters	100
N0511	Evaluate personnel for promotion, demotion, reclassification, or special awards	100
N0516	Inspect personnel for compliance with military standards	100
N0526	Write recommendations for awards or decorations	100
N0530	Write or endorse military performance reports	100
N0501	Develop or establish work schedules	100
N0486	Assign sponsors for newly assigned personnel	100
N0521	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	100
N0510	Evaluate personnel for compliance with performance standards, other than students	67
N0506	Establish performance standards for subordinates	67
N0514	Initiate actions required due to substandard performance of personnel	67
N0495	Determine or establish work assignments or priorities	67
N0523	Schedule personnel for TDY assignments, leaves, or passes	67
N0512	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	67
N0513	Implement safety or security programs	67
N0492	Conduct supervisory performance feedback sessions	67
N0491	Conduct supervisory orientations for newly assigned personnel	67
N0497	Develop organizational or functional charts	67
N0484	Annotate time and attendance sheets for civilian employees	67
H0354	Schedule daily hyperbaric chamber activities	33

TABLE A6

HYPERBARIC CHAMBER SPECIALIST INDEPENDENT JOB

TASKS		PERCENT MEMBERS PERFORMING (N=6)
H0312	Perform chamber operator duties during hyperbaric chamber dives	100
H0315	Perform crew chief duties during hyperbaric chamber dives	100
H0326	Perform inside observer duties during hyperbaric chamber dives	100
H0330	Perform loss of breathing gas safety procedures	100
H0329	Perform loss of accumulator air supply safety procedures	100
H0331	Perform mechanical emergencies safety procedures	100
H0314	Perform contaminated air supply safety procedures	100
H0313	Perform compressor failure safety procedures	100
H0347	Perform timekeeper duties during hyperbaric chamber dives	83
H0341	Perform procedures for maintaining infection control standards for hyperbaric treatment facilities	83
H0351	Prepare and maintain computer generated hyperbaric maintenance forms and reports	83
H0303	Clean, store, and maintain dive clothing and linen	83
H0323	Perform daily inspections of hyperbaric chamber fire suppression systems	83
H0328	Perform lock operator duties during hyperbaric chamber dives	83
H0319	Perform daily inspection of hyperbaric chamber console controls	83
H0318	Perform daily inspection of hyperbaric chamber communications systems	83
H0317	Perform daily inspection of hyperbaric chamber air pressurization systems	83
H0307	Load patients into or remove patients from hyperbaric chambers	83
H0310	Operate pass-thru locks	83
H0327	Perform interior or exterior chamber fire emergency safety procedures	83
H0359	Troubleshoot hyperbaric chamber systems	83
H0343	Perform recorder duties during hyperbaric chamber dives	67
A0010	Perform operational and emergency procedures as crew chief	67

APPENDIX B

TABLES B1-B21

TABLE B1

DISTRIBUTION OF DAFSC 4M0X1 GROUP MEMBERS ACROSS JOB CLUSTERS AND SPECIALTY JOBS
(PERCENT RESPONDING) *

<u>SPECIALTY JOBS</u>		4M031 (N=41)	4M051 (N=81)	4M071 (N=40)	4M091 (N=6)
I.	Altitude Chamber Cluster	88	72	75	100
II.	U2 Aerospace Physiology Cluster	2	16	8	0
III.	Aerospace Physiology Training Manager Independent Job	0	1	8	0
IV.	Centrifuge Research Assistant Independent Job	0	4	3	0
V.	Aerospace Physiology Manager Independent Job	0	1	5	0
VI.	Hyperbaric Chamber Specialist Independent Job	2	6	0	0
	Not Grouped	8	0	1	0

* Columns may not add up to 100 due to rounding

TABLE B2

RELATIVE PERCENT TIME SPENT PERFORMING DUTIES BY AD DAFSC 4M0X1 GROUP MEMBERS**

<u>DUTIES</u>	AD 4M031 (N=41)	AD 4M051 (N=81)	AD 4M071 (N=40)	AD 4M091 (N=6)
A PERFORM HYPOBARIC CHAMBER ACTIVITIES	36	17	12	4
B PERFORM LIFE SUPPORT EQUIPMENT ACTIVITIES, OTHER THAN PRESSURE SUIT	12	5	5	2
C PERFORM AERO PHYS INSTRUCTION OR TRAINING ACTIVITIES	16	16	12	9
D PERFORM PRESSURE SUIT PHYS SUPPORT ACTIVITIES	3	12	5	*
E PERFORM HIGH-ALTITUDE AIRDROP MISSION SUPPORT (HAAMS) ACTIVITIES	2	2	2	0
F PERFORM AIRCRAFT EMERGENCY ESCAPE AND SPECIAL PHYS TRAINER ACTIVITIES	3	5	3	5
G PERFORM PHYS RESEARCH ACTIVITIES	3	2	3	2
H PERFORM HYPERBARIC CHAMBER ACTIVITIES	5	10	3	6
I PERFORM PARASAIL ACTIVITIES	1	4	3	5
J PERFORM GENERAL ADMIN AND TECH ORDER (TO) SYS ACTIVITIES	8	6	7	6
K PERFORM GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	3	3	2
L PERFORM MEDICAL READINESS ACTIVITIES	2	2	3	6
M PERFORM TRAINING ACTIVITIES	4	7	11	10
N PERFORM MANAGEMENT AND SUPERVISORY ACTIVITIES	2	11	30	45

* Indicates less than 1 percent

** Columns may not add up to 100 due to rounding

TABLE B3

REPRESENTATIVE TASKS PERFORMED BY 3-SKILL-LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=41)
A0006 Perform inside observer duties during hypobaric chamber flights, other than research flights	93
A0026 Perform Type 4 chamber flights	93
A0010 Perform operational and emergency procedures as crew chief	93
A0024 Perform Type 2 chamber flights	90
A0023 Perform Type 1 chamber flights	90
B0038 Fit students with oxygen masks	88
B0037 Fit students with flight helmets	85
B0032 Clean flight helmets or oxygen masks	85
A0009 Perform operational and emergency procedures as chamber operator	83
A0013 Perform operational and emergency procedures as recorder	83
A0019 Perform Pressure Regulator Indicator Connections and Emergency (PRICE) check	83
A0001 Connect or disconnect high pressure oxygen cylinders	83
A0025 Perform Type 3 chamber flights	76
C0062 Conduct briefings on rapid decompression	73
A0012 Perform operational and emergency procedures as lock operator	71
A0015 Perform oxygen flow checks of narrow panel pressure-demand oxygen regulators	66
C0076 Conduct classroom instruction concerning PRICE check	66
A0011 Perform operational and emergency procedures as lecturer observer	61
C0064 Conduct classroom instruction concerning aircraft pressurization principles and problems	61
C0084 Conduct classroom instruction concerning use of oxygen equipment	59
B0040 Inspect or maintain life support equipment	56
A0008 Perform general maintenance or inspections on vacuum pumps	54
A0027 Perform Type 5 chamber flights	49
AVERAGE NUMBER OF TASKS PERFORMED	55

TABLE B4

REPRESENTATIVE TASKS PERFORMED BY 5-SKILL-LEVEL PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=81)
A0006	Perform inside observer duties during hypobaric chamber flights, other than research flights	81
A0024	Perform Type 2 chamber flights	77
A0026	Perform Type 4 chamber flights	75
A0001	Connect or disconnect high pressure oxygen cylinders	75
A0010	Perform operational and emergency procedures as crew chief	72
B0038	Fit students with oxygen masks	69
C0076	Conduct classroom instruction concerning PRICE check	68
A0023	Perform Type 1 chamber flights	68
B0037	Fit students with flight helmets	68
C0062	Conduct briefings on rapid decompression	68
C0080	Conduct classroom instruction concerning Type 2 chamber flights	67
A0011	Perform operational and emergency procedures as lecturer observer	65
C0082	Conduct classroom instruction concerning Type 4 chamber flights	65
C0084	Conduct classroom instruction concerning use of oxygen equipment	64
A0013	Perform operational and emergency procedures as recorder	63
M0469	Conduct OJT	63
M0470	Conduct tours of aerospace physiology facilities	63
B0032	Clean flight helmets or oxygen masks	62
A0009	Perform operational and emergency procedures as chamber operator	60
A0012	Perform operational and emergency procedures as lock operator	60
C0079	Conduct classroom instruction concerning Type 1 chamber flights	59
A0019	Perform Pressure Regulator Indicator Connections and Emergency (PRICE) check	58
M0471	Counsel trainees on training progress	48
AVERAGE NUMBER OF TASKS PERFORMED		79

TABLE B5

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 4M031 AND 4M051 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		4M031 (N=41)	4M051 (N=81)	DIFFERENCE
A0025	Perform Type 3 chamber flights	76	48	27
A0019	Perform Pressure Regulator Indicator Connections and Emergency (PRICE) check	83	58	25
B0032	Clean flight helmets or oxygen masks	85	62	24
A0009	Perform operational and emergency procedures as chamber operator	83	60	22
A0023	Perform Type 1 chamber flights	90	68	22
A0010	Perform operational and emergency procedures as crew chief	93	72	21
B0042	Maintain custom oxygen masks	39	19	21
N0511	Evaluate personnel for promotion, demotion,	0	26	-26
N0488	Conduct safety inspections of equipment or facilities	5	30	-25
M0479	Evaluate training methods or techniques of instructors	5	28	-24
C0083	Conduct classroom instruction concerning Type 5 chamber flights	12	36	-24
N0524	Write job or position descriptions	0	22	-22
N0514	Initiate actions required due to substandard performance of personnel	0	22	-22
N0491	Conduct supervisory orientations for newly assigned personnel	2	25	-22
N0512	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	2	25	-22
M0467	Brief personnel, other than students, concerning training programs or matters	10	32	-22
N0494	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	2	23	-21
N0489	Conduct self-inspections or self-assessments	10	31	-21

TABLE B6

REPRESENTATIVE TASKS PERFORMED BY 7-SKILL-LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=40)
N0517 Interpret policies, directives, or procedures for subordinates	80
N0516 Inspect personnel for compliance with military standards	80
N0493 Counsel subordinates concerning personal matters	78
M0469 Conduct OJT	78
M0472 Determine training requirements	78
A0006 Perform inside observer duties during hypobaric chamber flights, other than research flights	75
N0526 Write recommendations for awards or decorations	75
J0401 Maintain on-the-job (OJT) training records or files	75
N0487 Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	72
N0489 Conduct self-inspections or self-assessments	72
M0471 Counsel trainees on training progress	72
N0513 Implement safety or security programs	72
N0520 Review budget requirements	72
A0026 Perform Type 4 chamber flights	70
N0492 Conduct supervisory performance feedback sessions	70
A0024 Perform Type 2 chamber flights	70
N0514 Initiate actions required due to substandard performance of personnel	70
N0510 Evaluate personnel for compliance with performance standards, other than students	68
N0511 Evaluate personnel for promotion, demotion, reclassification, or special awards	68
N0530 Write or endorse military performance reports	68
N0495 Determine or establish work assignments or priorities	68
N0512 Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	68
N0506 Establish performance standards for subordinates	65
M0481 Personalize lesson plans	65
M0478 Evaluate effectiveness of training programs, plans, or procedures	55
AVERAGE NUMBER OF TASKS PERFORMED	104

TABLE B7

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 4M051 AND 4M071 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	4M051 (N=81)	4M071 (N=40)	DIFFERENCE
N0530 Write or endorse military performance reports	42	68	-26
N0490 Conduct staff assistance visits or audits	0	25	-25
N0504 Draft supplements or changes to directives such as policy directives, instructions, or manuals	2	28	-25
C0070 Conduct classroom instruction concerning hyperventilation	22	48	-25
C0071 Conduct classroom instruction concerning hypoxia	25	50	-25
M0467 Brief personnel, other than students, concerning training programs or matters	32	58	-25
M0471 Counsel trainees on training progress	48	72	-24
J0397 Initiate Random Anti-Terrorist Measures (RAM) procedures	5	28	-23
N0522 Review mobility, contingency, disaster preparedness, or unit emergency or alert plans	5	28	-23
M0475 Develop written tests	7	30	-23
N0488 Conduct safety inspections of equipment or facilities	30	52	-23
C0067 Conduct classroom instruction concerning decompression sickness	26	48	-22
M0479 Evaluate training methods or techniques of instructors	28	50	-22
N0496 Develop inputs to mobility, contingency, disaster preparedness, or unit emergency or alert plans	4	25	-21
M0473 Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	11	32	-21
N0509 Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace	16	38	-21
N0519 Plan layouts of facilities	7	28	-20
J0412 Prepare and maintain inspection and maintenance documentation	17	38	-20

TABLE B8

REPRESENTATIVE TASKS PERFORMED BY 9-SKILL-LEVEL PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=6)
N0511	Evaluate personnel for promotion, demotion, reclassification, or special awards	100
N0526	Write recommendations for awards or decorations	100
N0495	Determine or establish work assignments or priorities	100
N0487	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	100
N0493	Counsel subordinates concerning personal matters	100
N0494	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	100
N0510	Evaluate personnel for compliance with performance standards, other than students	100
N0517	Interpret policies, directives, or procedures for subordinates	100
N0520	Review budget requirements	100
N0521	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	100
N0485	Assign personnel to work areas or duty positions	100
M0472	Determine training requirements	100
N0516	Inspect personnel for compliance with military standards	100
N0512	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program	100
N0513	Implement safety or security programs	100
N0501	Develop or establish work schedules	100
N0530	Write or endorse military performance reports	83
N0502	Draft budget requirements	83
N0506	Establish performance standards for subordinates	83
N0500	Develop or establish work methods or procedures	83
M0471	Counsel trainees on training progress	83
N0522	Review mobility, contingency, disaster preparedness, or unit emergency or alert plans	83
N0497	Develop organizational or functional charts	83
AVERAGE NUMBER OF TASKS PERFORMED		126

TABLE B9

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 4M071 AND 4M091 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		4M071 (N=40)	4M091 (N=6)	DIFFERENCE
A0011	Perform operational and emergency procedures as lecturer observer	75	33	42
A0001	Connect or disconnect high pressure oxygen cylinders	82	50	32
A0010	Perform operational and emergency procedures as crew chief	65	33	32
A0002	Maintain emergency system batteries	30	0	30
A0031	Replace oxygen plumbing	30	0	30
A0012	Perform operational and emergency procedures as lock operator	45	17	28
M0477	Establish or maintain study reference files	45	17	28
B0056	Schedule inspections or maintenance of life support equipment, other than pressure suit assemblies	28	0	28
B0057	Store training aids or life support equipment	60	33	27
L0437	Evaluate effectiveness of implemented medical readiness plans	5	67	-62
N0522	Review mobility, contingency, disaster preparedness, or unit emergency or alert plans	28	83	-56
N0528	Write staff studies, surveys, or routine reports, other than training or inspection reports	30	83	-53
L0428	Administer or practice cardiopulmonary resuscitation (CPR)	50	100	-50
N0486	Assign sponsors for newly assigned personnel	50	100	-50
J0387	Complete chamber-related accident or incident reports	18	67	-49
N0515	Initiate personnel action requests	52	100	-48
N0521	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	52	100	-48

L0450	Load or unload patients on patient transportation vehicles	22	67	-44
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TABLE B10

RELATIVE PERCENT TIME SPENT PERFORMING DUTIES BY
FIRST-ENLISTMENT DAFSC 4M0X1 PERSONNEL

<u>DUTIES</u>	<u>PERCENT TIME SPENT (N=54)</u>
A PERFORMING HYPOBARIC CHAMBER ACTIVITIES	32
B PERFORMING LIFE SUPPORT EQUIPMENT ACTIVITIES, OTHER THAN PRESSURE SUIT	11
C PERFORMING AEROSPACE PHYSIOLOGY INSTRUCTION OR TRAINING ACTIVITIES	17
D PERFORMING PRESSURE SUIT PHYSIOLOGY SUPPORT ACTIVITIES	4
E PERFORMING HIGH-ALTITUDE AIRDROP MISSION SUPPORT (HAAMS) ACTIVITIES	1
F PERFORMING AIRCRAFT EMERGENCY ESCAPE AND SPECIAL PHYSIOLOGY TRAINER ACTIVITIES	5
G PERFORMING PHYSIOLOGY RESEARCH ACTIVITIES	2
H PERFORMING HYPERBARIC CHAMBER ACTIVITIES	6
I PERFORMING PARASAIL ACTIVITIES	3
J PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	8
K PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	3
L PERFORMING MEDICAL READINESS ACTIVITIES	2
M PERFORMING TRAINING ACTIVITIES	4
N PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	2

* Less than 1 percent

TABLE B11

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT
DAFSC 4M0X1 PERSONNEL

TASKS		PERCENT PERFORMING (N=54)
A0006	Perform inside observer duties during hypobaric chamber flights, other than research flights	93
A0026	Perform Type 4 chamber flights	91
A0024	Perform Type 2 chamber flights	91
A0010	Perform operational and emergency procedures as crew chief	89
A0023	Perform Type 1 chamber flights	85
B0038	Fit students with oxygen masks	85
B0037	Fit students with flight helmets	83
A0009	Perform operational and emergency procedures as chamber operator	81
A0013	Perform operational and emergency procedures as recorder	81
A0001	Connect or disconnect high pressure oxygen cylinders	80
B0032	Clean flight helmets or oxygen masks	80
A0019	Perform Pressure Regulator Indicator Connections and Emergency (PRICE) check	78
C0062	Conduct briefings on rapid decompression	76
A0012	Perform operational and emergency procedures as lock operator	69
C0076	Conduct classroom instruction concerning PRICE check	69
A0025	Perform Type 3 chamber flights	67
A0015	Perform oxygen flow checks of narrow panel pressure-demand oxygen regulators	67
C0084	Conduct classroom instruction concerning use of oxygen equipment	63
A0011	Perform operational and emergency procedures as lecturer observer	61
C0064	Conduct classroom instruction concerning aircraft pressurization principles and problems	61
AVERAGE NUMBER OF TASKS PERFORMED		63

TABLE B12

EXAMPLES OF EQUIPMENT USED BY FIRST-ENLISTMENT DAFSC 4M0X1 PERSONNEL
(PERCENT MEMBERS RESPONDING)

EQUIPMENT	1ST ENL (N=54)
Hypobaric Chambers	85
Vacuum Pumps	83
Oxygen Manifolds	83
Desktop Computers	78
Night Vision Trainers	56
Compressors	54
Oxygen Charging Assemblies	52
Audiovisual Equipment	48
Spatial Disorientation Trainers	44
Medical Supply Cabinets	43
Personal Protective Equipment	41
Classroom Mockups	35
Test Kits, Oxygen Regulator	33
Standard Scales (12- to 20-pound pull)	31
Swing Landing Trainers	28
Ejection Seat Trainers	26
Flight Aircrew Conditioning Test (FACT) Equipment	24
Parachutes	22
Calibration Equipment	20
Physical Training Equipment	20
Survival Kit	20
2-Way Radios	19
Flowmeters	19
Gauges, 0-15 Pounds Per Square Inch (PSI)	19
Parasail Equipment	19
Parasail Tow Vehicles	19
Testers, Exhalation Valve	17

TABLE B13

EXAMPLES OF TASKS RATED HIGHEST IN TRAINING EMPHASIS BY DAFSC 4M0X1 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING			
		TNG EMP	1ST JOB	1ST ENL	TASK DIFF
A0006	Perform inside observer duties during hypobaric chamber flights, other than research flights	7.45	96	93	5.95
A0010	Perform operational and emergency procedures as crew chief	7.34	91	89	5.97
A0009	Perform operational and emergency procedures as chamber operator	7.28	91	81	5.41
C0076	Conduct classroom instruction concerning PRICE check	6.38	48	69	4.34
A0013	Perform operational and emergency procedures as recorder	6.28	87	81	3.95
A0019	Perform Pressure Regulator Indicator Connections and Emergency (PRICE) check	6.21	78	78	3.54
C0084	Conduct classroom instruction concerning use of oxygen equipment	6.14	35	63	5.72
A0012	Perform operational and emergency procedures as lock operator	6.03	61	69	5.01
A0024	Perform Type 2 chamber flights	6.00	87	91	4.91
A0011	Perform operational and emergency procedures as lecturer observer	5.90	43	61	6.06
B0040	Inspect or maintain life support equipment	5.86	65	56	5.08
A0023	Perform Type 1 chamber flights	5.83	83	85	4.69
C0062	Conduct briefings on rapid decompression	5.83	61	76	4.91
A0007	Perform general maintenance on hypobaric chambers or subassemblies	5.72	65	56	5.68
A0026	Perform Type 4 chamber flights	5.69	91	91	4.72
B0038	Fit students with oxygen masks	5.62	87	85	2.55
A0008	Perform general maintenance or inspections on vacuum pumps	5.59	61	54	5.55
A0001	Connect or disconnect high pressure oxygen cylinders	5.52	83	80	1.37
B0037	Fit students with flight helmets	5.38	83	83	2.21

TE MEAN = 2.10; S.D. = 1.32; HIGH TE = 3.42

TD MEAN = 5.00; S.D. = 1.00; HIGH TD = 6.00

TABLE B14

EXAMPLES OF TASKS RATED HIGHEST IN TASK DIFFICULTY BY DAFSC 4M0X1 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING			
		TASK DIFF	1ST JOB	1ST ENL	TNG EMP
D0148	Perform overhaul inspections of full pressure suits	7.44	0	0	1.03
M0473	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	7.41	0	*	0.69
D0149	Perform overhaul inspections of pressure suit controllers	7.05	0	0	1.00
M0474	Develop training programs, plans, or procedures	7.00	0	4	1.03
F0225	Perform jumpmaster duties during military freefalls	6.95	0	0	0.31
N0530	Write or endorse military performance reports	6.89	0	0	1.31
C0087	Develop objectives and lesson plans	6.85	30	35	2.59
D0150	Perform overhaul inspections of pressure suit oxygen regulators	6.84	0	0	0.97
N0526	Write recommendations for awards or decorations	6.81	0	0	1.55
D0182	Troubleshoot full pressure suit assemblies	6.72	0	4	1.07
D0139	Perform annual inspections of full pressure suits	6.69	0	0	1.41
N0503	Draft host-tenant or interservice agreements	6.69	0	0	0.62
M0482	Prepare job qualification standards (JQSs)	6.69	4	4	0.52
F0226	Perform jumpmaster duties during static line jumps	6.69	0	0	0.31
H0359	Troubleshoot hyperbaric chamber systems	6.68	13	13	1.72
N0518	Investigate accidents or incidents, other than aircraft physiological incidents	6.66	0	0	0.79
F0220	Perform drop zone (DZ) control duties during parachuting jumps	6.62	4	4	1.93
N0525	Write inspection reports	6.61	0	0	1.28
N0502	Draft budget requirements	6.61	0	2	1.21
M0475	Develop written tests	6.61	4	6	1.07

* Less than 1 percent

TE MEAN = 2.10; S.D. = 1.32; HIGH TE = 3.42
TD MEAN = 5.00; S.D. = 1.00; HIGH TD = 6.00

TABLE B15

EXAMPLES OF UNSUPPORTED STS OBJECTIVES
(LESS THAN 20 PERCENT MEMBERS PERFORMING)

STS ELEMENTS/ MATCHED TASKS	TNG EMP	PERCENT PERFORMING		TASK DIFF	ATI
		4M0X1 1ST JOB (N=23)	4M0X1 1ST ENL (N=54)		
7.1. Spatial Disorientation Trainers					
- F0203 Conduct instruction on use of spatial disorientation trainers	3.24	17	20	5.15	7
- F0218 Perform daily inspections of spatial disorientation trainers	3.21	9	9	3.87	3
7.2.1. Perform daily inspections of vertigons					
- F0219 Perform daily inspections of vertigons	2.07	4	6	3.66	1
19.2.6. Perform parachute landing fall					
- F0208 Instruct or evaluate students on parachute landing fall (PLF) platforms	3.97	17	17	5.61	11
20.3.4. Recognize signs and symptoms, and manage the treatment of physiological reactions					
- E0196 Observe or treat aircrew, parachutists, and other aircraft occupants for physiological effects of altitude	2.72	0	13	5.70	7
21.11 Serve as centrifuge central observer					
- G0262 Perform central observer duties during centrifuge operations	1.62	4	2	5.84	2
- G0296 Serve as centrifuge central observer	1.45	1	1	4.87	2

TE MEAN = 2.10; S.D. = 1.32; HIGH TE = 3.42

TD MEAN = 5.00; S.D. = 1.00; HIGH TD = 6.00

TABLE B16

EXAMPLES OF UNSUPPORTED POI OBJECTIVES
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

POI ELEMENTS/ MATCHED TASKS	TNG EMP	PERCENT PERFORMING		TASK DIFF	ATI
		4M0X1 1ST JOB (N=23)	4M0X1 1ST ENL (N=54)		
III.15.a.(1) Perform four parachute landing falls (PLF) from the Swing Landing Trainer					
- <i>F0208</i> Instruct students on PLF platforms	3.97	17	17	5.61	11
IV.8.a.(1) Given an ISO-shelter, expand and close one side of the shelter					
- <i>L0463</i> Set up or tear down ISO-shelters	1.41	4	4	4.13	2

TE MEAN = 2.10; S.D. = 1.32; HIGH TE = 3.42

TD MEAN = 5.00; S.D. = 1.00; HIGH TD = 6.00

TABLE B17

COMPARISON OF JOB SATISFACTION INDICATORS OF TAFMS GROUPS TO COMPARATIVE SAMPLE OF SERVICES AFSCs
(PERCENT MEMBERS PERFORMING)

	1-48 Months TAFMS		49-96 Months TAFMS		97+ Months TAFMS	
	2002 4M0X1 (N=54)	COMP SAMPLE* (N=383)	2002 4M0X1 (N=24)	COMP SAMPLE* (N=255)	2002 4M0X1 (N=90)	COMP SAMPLE* (N=553)
<u>EXPRESSED JOB INTEREST:</u>						
Interesting	87	53	92	62	86	69
So-So	7	27	4	22	11	21
Dull	6	20	4	16	3	10
<u>PERCEIVED UTIL. OF TALENTS:</u>						
Fairly Well - Perfectly	87	74	88	77	90	83
Not at All/ Very Little	13	26	12	23	10	17
<u>PERCEIVED UTIL. OF TRAINING:</u>						
Fairly Well - Perfectly	95	83	96	84	89	84
Not at All/ Very Little	5	17	4	16	11	16
<u>SENSE OF ACCOMP GAINED BY WORK:</u>						
Satisfied	78	59	82	60	87	66
Neutral	15	19	8	12	6	13
Dissatisfied	7	22	8	29	7	21
<u>REENLISTMENT INTENTIONS:</u>						
Yes / Probably Yes	57	38	75	59	68	55
No / Probably No	43	60	21	39	1	11
Plan to Retire	0	2	4	2	31	34

* HEALTH AFSC'S: 4C0X1 (Mental Health Services), 4P0X1 (Pharmacy), 4V0X1 (Optometry), and 4V0X1A (Ophthalmology)

TABLE B18

COMPARISON OF JOB SATISFACTION INDICATORS OF TAFMS GROUPS IN CURRENT STUDY AND PREVIOUS STUDY
(PERCENT MEMBERS PERFORMING)

	1-48 Months TAFMS		49-96 Months TAFMS		97+ Months TAFMS	
	2002 (N=54)	1999 (N=72)	2002 (N=24)	1999 (N=51)	2002 (N=90)	1999 (N=124)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	87	86	92	78	86	79
SO-SO	7	8	4	16	11	15
DULL	6	6	4	6	3	6
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	87	83	88	94	90	85
NOT AT ALL/ VERY LITTLE	13	17	12	6	10	15
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	95	*	96	*	89	*
NOT AT ALL/ VERY LITTLE	5	*	4	*	11	*
<u>SENSE OF ACCOMPLISHMENT GAINED FROM WORK:</u>						
SATISFIED	78	75	83	76	87	76
NEUTRAL	15	11	9	12	6	12
DISSATISFIED	7	14	8	12	7	12
<u>REENLISTMENT INTENTIONS:</u>						
YES, OR PROBABLY YES	57	67	75	78	68	74
NO, OR PROBABLY NO	43	33	21	22	1	6
PLAN TO RETIRE	0	0	4	0	31	20

* Not included in previous survey

TABLE B19

COMPARISON OF JOB SATISFACTION INDICATORS BY SPECIALTY JOBS
(PERCENT MEMBERS PERFORMING) *

<u>DUTIES</u>	Alt Chamber Cluster (STG 009) N=130	U2 Aero Phys Cluster (STG 012) N=17	Aero Phys Tng Mgr Indep Job (STG 018) N=4	Centrifuge Research Asst Indep Job (STG 011) N=4	Aero Phys Mgr Indep Job (STG 019) N=3	Hyper Chamber Specialist Indep Job (STG 038) N=6
<u>EXPRESSED JOB INTEREST:</u>						
Interesting	87	94	75	75	67	100
So-So	8	6	0	25	33	0
Dull	5	0	25	0	0	0
<u>PERCEIVED UTIL. OF TALENTS:</u>						
Fairly Well - Perfectly	88	100	75	100	67	83
Not at All/ Very Little	12	0	25	0	33	17
<u>PERCEIVED UTIL. OF TRAINING:</u>						
Fairly Well - Perfectly	95	82	75	100	67	100
Not at All/ Very Little	5	18	25	0	33	0
<u>SENSE OF ACCOMP GAINED BY WORK:</u>						
Satisfied	84	88	75	100	67	83
Neutral	8	12	0	0	0	17
Dissatisfied	8	0	25	0	33	0
<u>REENLISTMENT INTENTIONS:</u>						
Yes / Probably Yes	62	71	75	75	67	83
No / Probably No	19	18	0	0	0	17
Plan to Retire	18	12	25	25	33	0

* Columns may not add up to 100 due to rounding

TABLE B20

**COMPARISON OF REENLISTMENT FACTORS BY TAFMS GROUPS
(AVERAGE RESPONSE SCORE)**

<i>31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY</i>	1-48 MONTHS TAFMS (N=31)		49-96 MONTHS TAFMS (N=18)		97+ MONTHS TAFMS (N=61)	
	Percent Selecting	Mean of Selecting	Percent Selecting	Mean of Selecting	Percent Selecting	Mean of Selecting
MILITARY LIFESTYLE	68	2.38	67	2.75	59	2.42
PAY AND ALLOWANCES	68	2.52	56	2.40	61	2.41
BONUS OR SPECIAL PAY	52	2.56	39	1.86	25	2.27
RETIREMENT BENEFITS	52	2.31	56	2.70	75	2.74
MILITARY-RELATED EDU & TNG OPPORTUNITIES	77	2.25	67	2.42	59	2.25
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	74	2.61	78	2.79	69	2.29
MEDICAL OR DENTAL CARE FOR AD MEMBER	81	2.76	50	2.78	66	2.70
MEDICAL OR DENTAL CARE FOR FAMILY MEMBERS	48	2.73	50	2.89	56	2.85
BASE HOUSING	23	2.14	44	2.38	20	2.42
BASE SERVICES	35	1.82	22	2.25	26	1.94
CHILDCARE NEEDS	16	2.80	17	2.67	15	2.33
SPOUSE'S CAREER	6	2.50	11	3.00	20	2.67
CIVILIAN JOB OPPORTUNITIES	16	1.60	6	2.00	10	2.33
EQUAL EMPLOYMENT OPPORTUNITIES	23	2.29	11	2.50	10	2.67
NUMBER OF PCS MOVES	13	2.25	12	1.50	11	2.71
LOCATION OF PRESENT ASSIGNMENT	35	2.45	22	2.50	30	2.44
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	19	1.33	6	3.00	15	2.33
WORK SCHEDULE	39	2.50	56	2.40	43	2.08
ADDITIONAL DUTIES	19	2.33	22	2.50	13	1.88
JOB SECURITY	55	2.53	67	2.92	72	2.75
ENLISTED EVALUATION SYSTEM	6	2.00	0	N/A	3	2.00
PROMOTION OPPORTUNITIES	52	2.38	39	2.57	26	2.62
TRAINING/EXPERIENCE OF UNIT PERSONNEL	29	2.22	17	2.33	11	2.43
UNIT MANNING	13	1.25	0	N/A	7	2.00
UNIT RESOURCES	13	1.50	0	N/A	5	2.33
UNIT READINESS	6	1.50	0	N/A	2	3.00
RECOGNITION OF EFFORTS	45	2.14	22	2.25	30	2.44
ESPRIT DE CORPS/MORALE	29	2.33	17	3.00	39	2.50
LEADERSHIP OF IMMEDIATE SUPERVISOR	42	2.15	17	2.33	18	2.36
LEADERSHIP AT UNIT LEVEL	45	1.93	17	3.00	16	2.20
SENIOR AIR FORCE LEADERSHIP	13	2.75	11	3.00	7	1.50

Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence

TOP 5 REASONS FOR MEMBERS REENLISTING BY TAFMS GROUPS

1-48 MONTHS TAFMS (N=31)	49-96 MONTHS TAFMS (N=18)	97+ MONTHS TAFMS (N=61)
MEDICAL OR DENTAL CARE FOR AD MEMBER	OFF-DUTY EDU OR TRAINING OPPORTUNITIES	RETIREMENT BENEFITS
MILITARY-RELATED EDU & TRAINING OPPORTUNITIES	JOB SECURITY	JOB SECURITY

OFF-DUTY EDU OR TRAINING OPPORTUNITIES	MILITARY LIFESTYLE	OFF-DUTY EDU OR TRAINING OPPORTUNITIES
PAY AND ALLOWANCES	MILITARY-RELATED EDU & TRAINING OPPORTUNITIES	MEDICAL OR DENTAL CARE FOR AD MEMBER
MILITARY LIFESTYLE	RETIREMENT BENEFITS	PAY AND ALLOWANCES

TABLE B21

**COMPARISON OF SEPARATION FACTORS BY TAFMS GROUPS
(AVERAGE RESPONSE SCORE)**

<i>31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY</i>	1-48 MONTHS TAFMS (N=23)		49-96 MONTHS TAFMS (N=5)		97+ MONTHS TAFMS (N=1)	
	Percent Selecting	Mean of Selecting	Percent Selecting	Mean of Selecting	Percent Selecting	Mean of Selecting
MILITARY LIFESTYLE	65	2.13	80	1.75	*	*
PAY AND ALLOWANCES	61	2.50	80	2.75	*	*
BONUS OR SPECIAL PAY	0	N/A	20	2.00	*	*
RETIREMENT BENEFITS	13	1.33	40	2.50	*	*
MILITARY-RELATED EDU & TNG OPPORTUNITIES	13	1.33	0	N/A	*	*
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	31	2.71	0	N/A	*	*
MEDICAL OR DENTAL CARE FOR AD MEMBER	13	2.00	0	N/A	*	*
MEDICAL OR DENTAL CARE FOR FAMILY MEMBERS	4	3.00	0	N/A	*	*
BASE HOUSING	26	2.17	0	N/A	*	*
BASE SERVICES	9	2.00	0	N/A	*	*
CHILDCARE NEEDS	9	2.00	0	N/A	*	*
SPOUSE'S CAREER	22	2.40	20	3.00	*	*
CIVILIAN JOB OPPORTUNITIES	43	2.70	40	3.00	*	*
EQUAL EMPLOYMENT OPPORTUNITIES	4	2.00	0	N/A	*	*
NUMBER OF PCS MOVES	22	2.60	20	2.00	*	*
LOCATION OF PRESENT ASSIGNMENT	26	2.17	40	3.00	*	*
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	4	2.00	40	2.50	*	*
WORK SCHEDULE	4	2.00	0	N/A	*	*
ADDITIONAL DUTIES	0	N/A	0	N/A	*	*
JOB SECURITY	4	1.00	0	N/A	*	*
ENLISTED EVALUATION SYSTEM	13	1.67	20	3.00	*	*
PROMOTION OPPORTUNITIES	13	2.33	20	1.00	*	*
TRAINING/EXPERIENCE OF UNIT PERSONNEL	9	2.00	20	3.00	*	*
UNIT MANNING	22	2.00	40	2.00	*	*
UNIT RESOURCES	4	1.00	0	N/A	*	*
UNIT READINESS	4	1.00	0	N/A	*	*
RECOGNITION OF EFFORTS	39	2.44	60	1.67	*	*
ESPRIT DE CORPS/MORALE	30	2.71	60	2.33	*	*
LEADERSHIP OF IMMEDIATE SUPERVISOR	35	2.25	0	N/A	*	*
LEADERSHIP AT UNIT LEVEL	35	2.00	60	2.00	*	*
SENIOR AIR FORCE LEADERSHIP	22	2.20	40	2.00	*	*

Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence

TOP 5 REASONS FOR MEMBERS SEPARATING BY TAFMS GROUPS

1-48 MONTHS TAFMS (N=23)	49-96 MONTHS TAFMS (N=5)	97+ MONTHS TAFMS (N=1)
MILITARY LIFESTYLE	PAY AND ALLOWANCES	N/A
PAY AND ALLOWANCES	MILITARY LIFESTYLE	N/A
CIVILIAN JOB OPPORTUNITIES	ESPRIT DE CORPS/MORALE	N/A

RECOGNITION OF EFFORTS	LEADERSHIP AT UNIT LEVEL	N/A
LEADERSHIP OF IMMEDIATE SUPERVISOR	RECOGNITION OF EFFORTS	N/A